



21 April 2016

Water Submissions  
Ministry for the Environment  
PO Box 10362  
Wellington 6143  
watersubmissions@mfe.govt.nz

Dear Sir/Madam

**Re: Submission on Next Steps for Fresh Water: Consultation document**

Thank you for the opportunity to provide a written submission on this consultation document.

Regional Public Health serves the greater Wellington region, through its three district health boards (DHBs): Capital & Coast, Hutt Valley and Wairarapa and is based at the Hutt Valley District Health Board.

We work with our community to make it a healthier safer place to live. We promote good health, prevent disease, and improve the quality of life for our population, with a particular focus on children, Māori and working with primary care organisations. Our staff includes a range of occupations such as: medical officers of health, public health advisors, health protection officers, public health nurses, and public health analysts. The Ministry of Health requires us to reduce potential health risks by ensuring that public health risks associated with resource management activities are considered.

We are happy to provide further advice or clarification on any of the points raised in our written submission. The contact point for this submission is:

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Kind Regards

Dr Jill McKenzie  
**Medical Officer of Health**

Peter Gush  
**Service Manager**

## General statements

Regional Public Health supports the intent of the proposed amendments to clarify aspects of the management of freshwater quality particularly in regards to the concept of overall water quality and freshwater management units.

Regional Public Health supports the concept of freshwater objectives linked to values, and the requirement to maintain and improve freshwater quality over time and believes such an approach will assist in the planning of local freshwater objectives by communities. We support the concept of bottom line compulsory values for particular attributes.

## Fresh water and our environment

### Maintain or improve overall water quality

#### 1.1 Freshwater management units

Regional Public Health supports the proposal to clarify objective A2 of the National Policy Statement for Freshwater Management, via use of a freshwater management unit as the base unit for maintaining and improving freshwater quality, rather than region wide. Such an approach supports an integrated catchment management approach and Regional Public Health support a freshwater management unit being set at a catchment level. However, the most appropriate determination of a freshwater management unit for any particular region should be determined after stakeholder and public engagement.

Regional Public Health **recommends** wide consultation for establishment of freshwater management units and development of best practice guidance around stakeholder engagement in setting freshwater management units.

#### 1.2 Flexibility to maintain water quality by ensuring water quality stays within an attribute band.

Regional Public Health has some concerns with the concept of maintaining and improving **overall** water quality across a freshwater management unit being associated with staying within an attribute band.

Such an approach may potentially allow for degradation in water quality of some parts of the management unit but be compensated for, or offset by, an improvement elsewhere in the management unit. It is potentially difficult to rate the relative importance of different attributes such as dissolved oxygen at one point as relative to fish habitat, against a measure of *E. coli* at a swimming spot for human health protection. It is very difficult to measure overall improvement or degradation of water quality against a range of attributes.

Regional Public Health has particular concerns regarding potential increases in public health risk associated with the aim to stay within an attribute state band for human health for recreation. These bands have a wide range of results and therefore a wide range of associated illness risk. For example, a water body that is frequently used by large numbers of bathers could be managed in such a way as to allow an increase in the 95<sup>th</sup> percentile for *E. coli* from 260 per 100 ml to 539 per 100ml, resulting in additional illness associated with recreational

water contact (the risk associated with primary contact is quantified within the Recreational Water Quality Guidelines<sup>1</sup>). Therefore, there is a potential for significant deterioration in water quality and increased public health risk although the waterway remains within the same band. The net effect could be an overall drift to the lower end of attribute bands across regions, equating to degradation in water quality.

The national bottom line value for human health for recreation is relatively permissive at a numeric state of 1000 *E. coli* per 100mls for secondary contact only. Furthermore, this value is based on an annual median rather than a 95<sup>th</sup> percentile, so the level of exposure and therefore associated risk of illness could be much higher than this limit, at certain times. Regional Public Health would be concerned if the microbiological quality of recreational water within a freshwater management unit decreases and thus public health risk increases, due to trade-offs with other parts of the freshwater management unit against other attributes, or trade-offs with the attributes of neighbouring surface or groundwater sources.

Regional Public Health believes that a more appropriate approach to water quality is that the quality of each freshwater management unit shall be required to be maintained or improved.

Regional Public Health **recommends** the word “overall” be deleted from Objective A2 of the National Policy Statement for Freshwater Management and that “within a region” is defined as “within freshwater management units”.

However, we note the challenges of achieving this objective and the reasoning for considering the use of trade-offs and maintaining or improving quality being defined as staying within the current band of the National Objectives Framework. To manage potential public health risk, any consideration of utilising trade-offs will require transparency and explicit review of potential public health risk, and only be agreed upon following informed public and stakeholder discussion.

Regional Public Health **recommends** that the management of public health risks be explicitly considered in discussion with stakeholders during any consideration of utilising trade-offs.

## **Macroinvertebrate Community Index (MCI)**

### **1.3 Require use of Macroinvertebrate Community Index as measure of quality**

Regional Public Health believes that ecosystem health should be a compulsory value. Regional Public Health is comfortable with the use of a MCI as a mandatory method of measuring ecosystem health of water quality. However, Regional Public Health considers that environmental concerns in relation to fresh water management cannot be seen in isolation from public health. For example, effects on ecosystem health, such as the growth of periphyton, cyanobacteria, or the presence in the water body of pathogens, can all affect the ability of the public to safely use water bodies for recreation or a source of drinking water, and is of public health concern. A MCI should be considered as only one measure of water quality.

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<sup>1</sup> An increase from a risk of 1 in 100 chance of illness with campylobacteriosis to 5 in 100 chance of illness; Microbiological water quality guidelines for marine and freshwater recreational areas. MFE and MoH (2003) Part III Explanatory Notes to the Guidelines, Table H2. <http://www.mfe.govt.nz/publications/international-environmental-agreements/microbiological-water-quality-guidelines-marine#notehix>

Regional Public Health **supports** making the use of Macroinvertebrate Community Index a mandatory method of monitoring ecosystem health, alongside other attributes within the National Objectives Framework.

## **Stock exclusion from water bodies**

### **1.8 Create a national regulation**

Regional Public Health recognises that stock exclusion from recreational water ways is an important component to an effective Integrated Catchment Management Plan. Direct stock access to water ways, particularly cattle, can have an adverse microbiological impact on water quality and therefore elevated human health risks. Regional Public Health strongly supports the proposal to exclude stock from waterways. We note that this has been limited to only certain species and would welcome consideration of such a policy including all stock. Regional Public Health is aware of a local example of a stream with poor microbiological quality used by children, with a significant improvement in water quality after sheep were no longer farmed upstream.

Regional Public Health **recommends** that the impact of other stock (such as sheep) is included in the development of a national regulation.

### **2.1 Economic use of fresh water**

#### **Technical efficiency and good management practice standards; Transferring consents to more efficient, higher valued uses; Addressing over-allocation and over-use at least cost**

Regional Public Health is supportive of the proposals to develop technical efficiency and good management practice standards. It is important that not only is water quality improved to protect public health but that security of water supply is maintained, especially with regards to sources of human drinking water. Although the National Policy Statement for Freshwater Management does not contain an explicit objective around water quantity to safeguard the health of people and communities, security of drinking water supplies is necessary for human life-supporting capacity. It is important that these standards recognise this need for human health. This is further supported by the National Policy Statement for Freshwater Management Additional National Value of Wai Māori/municipal and domestic water supply: the freshwater management unit can meet people's potable water needs and that water quality and **quantity** would enable domestic water supply to be safe for drinking.

In addition, it is important the benefits of efficient use and good management practice are fairly distributed within a community. The measures of efficiency should not disadvantage already vulnerable communities, particularly around security of water sources.

Regional Public Health **recommends** that the efficiency and good management practice standards give particular reference to protection of small rural drinking water supplies, which are most at risk of adverse impacts on water quality (e.g. from poorly managed discharges to land that can impact on groundwater quality in the future) and security of supply (e.g. priority of water allocation given to large and efficient economic activities at the risk of reducing supplies for small communities).

## **Iwi rights and interests in fresh water**

### **Clean safe drinking water for marae and papakāinga**

#### **3.8 Additional funding to develop or improve water infrastructure at marae and papakāinga**

Regional Public Health welcomes and supports the recommendation that the Government will consider if additional funding is required to develop or improve water infrastructure at marae and papakāinga. Marae are often located in rural areas and access to potable water supplies is not good. Regional Public Health has worked with marae and iwi authorities across the greater Wellington area and is aware that there are a number of marae where work to improve water quality and quantity is necessary to improve public health outcomes. In addition, there are areas that do not meet the definition of a marae or papakāinga (serving predominantly Māori communities) with water supplies that are at risk in terms of security of supply and quality.

Regional Public Health **recommends** that consideration be given to extending funding to improve infrastructure to water deprived rural communities that may not be considered marae or papakāinga.

## **Freshwater funding**

### **Freshwater improvement fund**

#### **4.1 Criteria for eligible projects**

Regional Public Health notes the intent to target funding of irrigation projects towards those that provide environmental benefits. It is important that impacts on human well-being are explicitly included within the definition of the environment. Regional Public Health recommends that all funding prioritisation should be supported by a robust social impact assessment (SIA), which includes the economic and environmental impacts on health and well-being and the distribution of these impacts amongst the community. To fully assess the impacts and distribution requires an understanding of both direct physical impacts on health (such as risks to water quality and sufficient quantity for drinking water supplies) and indirect benefits (such as whom within the community will receive an economic benefit from a project, and who might be worse off). A robust SIA is able to identify unintended consequences from a project and allow opportunity to mitigate against these before decisions are made. The aim is to ensure that any groups already disadvantaged within a community are not further disadvantaged by the decisions made.

Regional Public Health **recommends** that the criteria for eligibility of the freshwater improvement fund include the need for a Social Impact Assessment that includes explicit consideration of health impacts and the distribution of these within the community.

## Summary of recommendations

### Proposal

- 1.1 Regional Public Health **recommends** wide consultation for establishment of freshwater management units and development of best practice guidance around stakeholder engagement in setting freshwater management units.
- 1.2 Regional Public Health **recommends** the word “overall” be deleted from Objective A2 of the National Policy Statement for Freshwater Management and that “within a region” is defined as “within freshwater management units”.  
  
Regional Public Health **recommends** that the management of public health risks be explicitly considered in discussion with stakeholders during any consideration of utilising trade-offs.
- 1.3 Regional Public Health **supports** making the use of Macroinvertebrate Community Index a mandatory method of monitoring ecosystem health, alongside other attributes within the National Objectives Framework.
- 1.8 Regional Public Health **recommends** that the impact of other stock (such as sheep) is included in the development of a national regulation.
- 2.1 Regional Public Health **recommends** that the efficiency and good management practice standards give particular reference to protection of small rural drinking water supplies, which are most at risk of adverse impacts on water quality (e.g. from poorly managed discharges to land that can impact on groundwater quality in the future) and security of supply (e.g. priority of water allocation given to large and efficient economic activities at the risk of reducing supplies for small communities).
- 3.8 Regional Public Health **recommends** that consideration be given to extending funding to improve infrastructure to water deprived rural communities that may not be considered marae or papakāinga.
- 4.1 Regional Public Health **recommends** that the criteria for eligibility of the freshwater improvement fund include the need for a Social Impact Assessment that includes explicit consideration of health impacts and the distribution of these within the community